

FORM PTO-1449  
(REV.7-80)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.  
480140.434D1APPLICATION NO.  
09/989,903

## INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

## APPLICANTS

Emad S. Alnemri and Teresa Fernandez-Alnemri

## FILING DATE

November 20, 2001

## GROUP ART UNIT

1642

## U.S. PATENT DOCUMENTS

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## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
					YES	NO
W	AA	WO 95/24427	09/14/95	WIPO		
	AB	WO 96/13603	05/09/96	WIPO		
	AC	WO 96/25945	08/29/96	WIPO		
	AD	WO 99/10504	03/04/99	WIPO		
	AE	WO 99/23106	05/14/99	WIPO		
	AF	WO 00/04169	01/27/00	WIPO		

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## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

W	AG	Ahmad et al., "Identification and Characterization of Murine Caspase-14, a New Member of the Caspase Family," <i>Cancer Research</i> 58: 5201-5205, 1998.
	AH	Alnemri et al., "Human ICE/CED-3 Protease Nomenclature," <i>Cell</i> 87: 171, 1996.
	AI	Barinaga, "Cell Suicide: By ICE, Not Fire," <i>Science</i> 263: 754-756, 1994.
	AJ	Black et al., "Activation of Interleukin-1 $\beta$ by a co-induced protease," <i>FEBS Letters</i> 247(2): 386-390, 1989.
	AK	Boldin et al., "A Novel Protein That Interacts with the Death Domain of Fas/APO1 Contains a Sequence Motif Related to the Death Domain," <i>J. Biol. Chem.</i> 270(14): 7795-7798, 1995.
	AL	Boldin et al., "Involvement of MACH, a Novel MORT1/FADD-Interacting Protease, in Fas/APO-1- and TNF Receptor-Induced Cell Death," <i>Cell</i> 85: 803-815, 1996.
	AM	Bowie et al., "Deciphering the Message in Protein Sequences: Tolerance of Amino Acid Substitutions," <i>Science</i> 247: 1306-1310, March 1990.
	AN	Burgess et al., "Possible Dissociation of the Heparin-binding and Mitogenic Activities of Heparin-binding (Acidic Fibroblast) Growth Factor-1 from Its Receptor-binding Activities by Site-directed Mutagenesis of a Single Lysine Residue," <i>J. of Cell. Bio.</i> 111: 21, May 1990.

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BA	Cerretti et al., "Molecular Cloning of the Interleukin-1 $\beta$ Converting Enzyme," <i>Science</i> 256: 97-100, 1992.
BB	Chinnaiyan et al., "FADD, a Novel Death Domain-Containing Protein Interacts with the Death Domain of Fas and Initiates Apoptosis," <i>Cell</i> 81: 505-512, 1995.
BC	Cohen, "Caspases: the executioners of apoptosis," <i>Biochem. J.</i> 326: 1-16, 1997.
BD	Duan et al., "ICE-LAP3, a Novel Mammalian Homologue of the <i>Caenorhabditis elegans</i> Cell Death Protein Ced-3 Is Activated during Fas- and Tumor Necrosis Factor-induced Apoptosis," <i>J. Biol. Chem.</i> 271(3): 1621-1625, 1996.
BE	Duan et al., "ICE-LAP6, a novel member of the ICE/Ced-3 Gene Family, Is Activated By the Cytotoxic T Cell Protease Granzyme," <i>J. Biol. Chem.</i> 271: 16720-16724, 1996.
BF	Enari et al., "Involvement of an ICE-like protease in Fas-mediated apoptosis," <i>Nature</i> 375: 78-81, 1995.
BG	Faucheu et al., "Identification of a cysteine protease closely related to interleukin-1 $\beta$ -converting enzyme," <i>Eur. J. Biochem.</i> 236: 207-213, 1996.
BH	Fernandes-Alnemri et al., "CPP32, a Novel Human Apoptotic Protein with Homology to <i>Caenorhabditis elegans</i> Cell Death Protein Ced-3 and Mammalian Interleukin-1 $\beta$ -converting Enzyme," <i>J. Biol. Chem.</i> 269(49): 30761-30764, 1994.
BI	Fernandes-Alnemri et al., "In Vitro Activation of CPP32 and Mch3 by Mch4, a novel human apoptotic cysteine protease containing two FADD-like domains," <i>Proc. Natl. Acad. Sci. USA</i> 93: 7464-7469, 1996.
BJ	Fernandes-Alnemri et al., "Mch3, A Novel Human Apoptotic Cysteine Protease Highly Related to CPP32," <i>Cancer Research</i> 55(24): 6045-6052, 1995.
BK	Gagliardini et al., "Prevention of Vertebrate Neruonal Death by the <i>crmA</i> Gene," <i>Science</i> 263: 826-828, 1994.
BL	Hillier et al., "The WashU-Merck EST Project," <i>EMBL/Genbank Databases</i> , Accession No. T96912, Sequence Reference HS91272, 1995; <a href="http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?uid=735536&amp;form=6&amp;db=n&amp;Dopt=g">http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?uid=735536&amp;form=6&amp;db=n&amp;Dopt=g</a> . [Accessed 21 Jan 99].

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FORM PTO-1449 (REV. 7-80)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 480140.434D1	APPLICATION NO. 09/989,903
<b>INFORMATION DISCLOSURE STATEMENT</b> (Use several sheets if necessary)		APPLICANTS Emad S. Alnemri and Teresa Fernandez-Alnemri	
		FILING DATE November 20, 2001	GROUP ART UNIT 1642

## U.S. PATENT DOCUMENTS

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## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

COPY OF PAPERS ORIGINALLY FILED	CA	Hillier et al., "The WashU-Merck EST Project," <i>EMBL/Genbank Databases</i> , Accession No. N42544, Sequence Reference HS544281, 1996; <a href="http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?uid=1166974&amp;form=6&amp;db=n&amp;Dopt=g">http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?uid=1166974&amp;form=6&amp;db=n&amp;Dopt=g</a> . [Accessed 21 Jan 99].
	CB	Howard et al., "IL-1-Converting Enzyme Requires Aspartic Acid Residues for Processing of the IL-1 $\beta$ Precursor at Two Distinct Sites and Does Not Cleave 31-kDa IL-1 $\alpha$ ," <i>J. Immunol.</i> 147(9): 2964-2969, 1991.
	CC	Hsu et al., "TRADD-TRAF2 and TRADD-FADD Interactions Define Two Distinct TNF Receptor 1 Signal Transduction Pathways," <i>Cell</i> 84: 299-308, 1996.
	CD	Hu et al., "Caspase-14 Is a Novel Developmentally Regulated Protease," <i>The Journal of Biological Chemistry</i> 273(45): 29648-29653, 1998.
	CE	Humke et al., "ERICE, A Novel FLICE-activatable Caspase," <i>J. Biol. Chem.</i> 273(25): 15702-15707, 1998.
	CF	Juan et al., "Identification and Mapping of Casp7, a Cysteine Protease Resembling CPP32 $\beta$ , Interleukin-1 $\beta$ Converting Enzyme, and CED-3," <i>Genomics</i> 40: 86-93, 1997.
	CG	Kischkel et al., "Cytotoxicity-dependent APO-1 (Fas/CD95)-associated proteins form a death-inducing signaling complex (DISC) with the receptor," <i>The EMBO Journal</i> 14(22): 5579-5588, 1995.
	CH	Korsmeyer, "Regulators of cell death," <i>TIG</i> 11(3): 101-105, 1995.
	CI	Kostura et al., "Identification of a monocyte specific pre-interleukin 1 $\beta$ convertase activity," <i>Proc. Natl. Acad. Sci. USA</i> 86: 5227-5231, 1989.
	CJ	Kumar et al., "Induction of apoptosis by the mouse <i>Nedd2</i> gene, which encodes a protein similar to the product of the <i>Caenorhabditis elegans</i> cell death gene <i>ced-3</i> and the mammalian IL-1 $\beta$ -converting enzyme," <i>Genes Dev.</i> 8: 1613-1626, 1994.
	CK	Lazar et al., "Transforming Growth Factor alpha: Mutation of Aspartic Acid 47 and Leucine 48 Results in Different Biological Activities," <i>Molecular and Cellular Biology</i> 8: 1247-1252, March 1988.

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DA	Lippke et al., "Identification and Characterization of CPP32/Mch2 Homolog 1, a Novel Cysteine Protease Similar to CPP32," <i>J. Biol. Chem.</i> 271(4): 1825-1828, 1996.
DB	Los et al., "Requirements of an ICE/CED-3 protease for Fas/APO-1-mediated apoptosis," <i>Nature</i> 375: 81-83, 1995.
DC	Mann and Wilm, "Electrospray mass spectrometry for protein characterization," <i>TIBS</i> 20: 219-224, 1995.
DD	Marra et al., "The Washu-HHMI Mouse EST Project," <i>EMBL/Genbank Databases</i> Accession No. AA103647, Sequence Reference Mmaa3647, 1996.
DE	Marra et al., "The WashuU-HHMI Mouse EST Project," <i>EMBL/Genbank Databases</i> Accession No. AA167930, Sequence Reference Mmaa67930, 1996.
DF	Marra et al., "The WashuU-HHMI Mouse EST Project," <i>EMBL/Genbank Databases</i> Accession No. AA726845, Sequence Reference Aa726845, 1998.
DG	Miura et al., "Induction of Apoptosis in Fibroblasts by IL-1 $\beta$ -Converting Enzyme, a Mammalian Homolog of the <i>C. elegans</i> Cell Death Gene <i>ced-3</i> ," <i>Cell</i> 75: 653-660, 1993.
DH	Muller, C.P., Accession No. AAW57087, Genbank, Bethesda, MD, 1998.
DI	Muzio et al., "FLICE, A Novel FADD-Homologous ICE/CED-3-like Protease, Is Recruited to the CD95 (Fas/APO-1) Death-Inducing Signaling Complex," <i>Cell</i> 85: 817-827, 1996.
DJ	Nagata and Golstein, "The Fas Death Factor," <i>Science</i> 267: 1449-1456, 1995.
DK	Nagata, "Apoptosis by Death Factor," <i>Cell</i> 88: 355-365, 1997.
DL	Nicholson et al., "Identification and inhibition of the ICE/CED-3 protease necessary for mammalian apoptosis," <i>Nature</i> 376: 37-43, 1995.
DM	Piérard et al., "Mutant and Chimeric Recombinant Plasminogen Activators," <i>The Journal Of Biological Chemistry</i> 262(24): 11771-11778, 1987.
DN	Ray et al., "Viral Inhibition of Inflammation: Cowpox Virus Encodes an Inhibitor of the Interleukin-1 $\beta$ Converting Enzyme," <i>Cell</i> 69: 597-604, 1992.

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COPY OF PAPERS ORIGINALLY FILED	EA	Reed, "Mini-Review: Cellular Mechanisms of Disease Series: Bcl-2 and the Regulation of Programmed Cell Death," <i>J. Cell Biol.</i> 124(1 & 2): 1-6, 1994.
	EB	Sakamaki et al., "Molecular cloning and characterization of mouse caspase-8," <i>Eur. J. Biochem.</i> 253(2): 399-405, 1998.
	EC	Salvesen and Dixit, "Caspases: Intracellular Signaling by Proteolysis," <i>Cell</i> 91: 443-446, 1997.
	ED	Scaffidi et al., "Flice Is Predominantly Expressed as Two Functionally Active Isoforms, Caspase-8/a and Caspase-8/b," <i>The Journal of Biological Chemistry</i> 272(43): 26953-26958, 1997.
	EE	Scott et al., "The Pendred syndrome gene encodes a chloride-iodide transport protein," <i>nature Genetics</i> 21: 440-443, 1999.
	EF	Sleath et al., "Substrate Specificity of the Protease That Processes Human Interleukin-1 $\beta$ ," <i>J. Biol. Chem.</i> 265(24): 14526-14528, 1990.
	EG	Srinivasula et al., "Autoactivation of Procaspase-9 by Apaf-1-Mediated Oligomerization," <i>Mol. Cell.</i> 1: 949-957, 1998.
	EH	Srinivasula et al., "Generation of Constitutively Active Recombinant Caspases-3 and -6 by Rearrangement of Their Subunits," <i>J. Biol. Chem.</i> 273(17): 10107-10111, 1998.
	EI	Srinivasula et al., "The Ced-3/Interleukin 1 $\beta$ Converting Enzyme-like Homolog Mch6 and the Lamin-cleaving Enzyme Mch2 $\alpha$ Are Substrates for the Apoptotic Mediator CPP32," <i>J. Biol. Chem.</i> 271(43): 27099-27106, 1996.
	EJ	Steller, "Mechanisms and Genes of Cellular Suicide," <i>Science</i> 267: 1445-1449, 1995.
EK	Tao et al., "Studies of Aglycosylated Chimeric Mouse-Human IgG," <i>The Journal of Immunology</i> 143: 2595-2601, October 1989.	
EL	Tewari et al., "Yama/CPP32 $\beta$ , a Mammalian Homolog of CED-3, Is a CrmA-Inhibitable Protease That Cleaves the Death Substrate Poly(ADP-Ribose) Polymerase," <i>Cell</i> 81: 801-809, 1995.	

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## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

FA	Thompson, "Apoptosis in the Pathogenesis and Treatment of Disease," <i>Science</i> 267: 1456-1462, 1995.
FB	Thornberry et al., "A novel heterodimeric cysteine protease is required for interleukin-1 $\beta$ processing in monocytes," <i>Nature</i> 356: 768-774, 1992.
FC	Van de Craen et al., "Cloning Of Murine Ice Homologues," <i>European Cytokine Network</i> 7(2): p. 220, Abstract No. 102, at 6 <sup>th</sup> International Tumor Necrosis Factor Congress Rhodes, Greece, May 8-12, 1996.
FD	Van de Craen et al., "Characterization of seven murine caspase family members," <i>FEBS Letters</i> 403: 61-69, 1997.
FE	Van de Craen et al., "Identification of a New Caspase Homologue: Caspase-14," <i>Cell Death and Differentiation</i> 5: 838-846, 1998.
FF	Walker et al., "Crystal Structure of the Cysteine Protease Interleukin-1 $\beta$ -Converting Enzyme: A(p20/p10), Homodimer," <i>Cell</i> 78: 343-352, 1994.
FG	Wang et al., "Ich-1, an Ice/ced-3-Related Gene, Encodes Both Positive and Negative Regulators of Programmed Cell Death," <i>Cell</i> 78: 739-750, 1994.
FH	Williams and Smith, "Molecular Regulation of Apoptosis: Genetic Controls on Cell Death," <i>Cell</i> 74: 777-779, 1993.
FI	Wilm et al., "Femtomole sequencing of proteins from polyacrylamide gels by nano-electrospray mass spectrometry," <i>Nature</i> 379: 466-469, 1996.
FJ	Wilson et al., "Structure and mechanism of interleukin-1 $\beta$ converting enzyme," <i>Nature</i> 370: 270-275, 1994.
FK	Yuan et al., "The C. elegans Cell Death Gene ced-3 Encodes a Protein Similar to Mammalian Interleukin-1 $\beta$ -Converting Enzyme," <i>Cell</i> 75: 641-652, 1993.
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**FOREIGN PATENT DOCUMENTS**

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